



SMALLPOX

Agent Information:

DNA, orthopoxvirus. Incubation period 7-17 days. There are two principal forms of disease, variola major and a milder form, variola minor. Variola major mortality is $\geq 30\%$ among unvaccinated individuals. Flat and hemorrhagic smallpox are variations of variola major. While rare, they have increased mortality.

Signs and Symptoms:

- Prodrôme: Duration 2-4 days; contagious. Fever (101-104°F), malaise, myalgias, headache, patients usually too sick to carry on normal activities.
- Early Rash: Duration 4 days; most contagious. Rash emerges in the oropharynx and spreads. Highly contagious at this time.
- Rash then spreads to the face and then to the extremities. Usually the rash spreads to all parts of the body within 24 hours. Fever subsides. Rash is centrifugal; lesions evolve at the same rate and at the same stage of development; spread to palms and soles is common.
- 3rd day - lesions become raised bumps.
- 4th day - lesions become fluid-filled and umbilicated. Fever may rise.
- 5th day – pustular rash; sharply raised, round and firm. Pustules then begin to crust over and scab.
- 6th day – resolving scabs; begin to separate and leave scars. Most scabs separate within 3 weeks after rash appears.
- Person is no longer contagious when all scabs have separated. Scabs contain live virus.

Transmission:

Person-to-person transmission, primarily via droplets from the oropharynx. Those within 6 feet to the infected person appear to be at greatest risk. Contaminated clothing or bed linens can also spread the virus. There are no known animal or insect reservoirs or vectors.

Decontamination:

No, the virus is very fragile in the unprotected environment. Only clothing removal is necessary.

Isolation:

Negative pressure.

**Protective Measures:**

Persons treating patients with confirmed or suspect smallpox should be vaccinated. In the setting of an early outbreak, care can be provided immediately after vaccination. PPE alone is not sufficient protection. At a minimum, healthcare workers should employ contact, droplet and airborne precautions by wearing an N-95 mask. Maintain patients in negative pressure isolation rooms. The patient is contagious until all scabs have separated.

Lab Samples Requested for Evaluation:

Smallpox, VZV and herpes simplex virus: Using a Dacron swab, collect vesicular/pustular fluid or scab. Place swab in viral transport medium and transport to lab within 12 hours of collection. For serological testing: collect blood in serum separator tube (red / black top tube).

Specimens from high-risk patients will be shipped immediately to CDC.

Prophylaxis:**Post-exposure Vaccination: (priority for vaccination):**

- Persons exposed to the initial release of the virus;
- household and face-to-face contacts;
- personnel who may provide direct healthcare or public health evaluation;
- laboratory workers responsible for collection or processing specimens;
- persons who may be in contact with infectious material (housekeeping, mortuary workers, etc.);
- response personnel (law enforcement, EMS, etc.); and
- all individuals present at a hospital during the time that a smallpox patient is present and not properly isolated.

Treatment:

- No antiviral substances have *proven* effectiveness for smallpox treatment.
- Vaccination administered within 3-4 days of first exposure offers some protection against acquiring infection, and significant protection against a fatal outcome.

Reporting:

Immediately report suspect cases to Delaware's Division of Public Health, Epidemiology Branch: 1-888-295-5156 (24/7 coverage).

Contact Information:

Delaware's Division of Public Health, Epidemiology Branch: 1-888-295-5156. For additional information, view the CDC website: www.bt.cdc.gov.

24/7 Emergency Contact Number: 1-888-295-5156

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